

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-10 are presently pending in this application, Claims 1-3 having been amended and Claims 4-10 having been newly added by the present amendment.

In the outstanding Office Action, the specification was objected to for informalities; Claim 3 was rejected under 35 U.S.C. §102(b) as being anticipated by Futakuchiya et al. (U.S. Patent 6,180,931); Claim 1 was rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. (U.S. Publication 2001/0035403); and Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. in view of Bremer (U.S. Patent 3,110,795) or Futakuchiya et al.

In response to the objection to the specification, the objected abstract of disclosure has been replaced with a new abstract which is believed to be in compliance with the requirement of the rule.

Claims 1-3 have been amended and Claims 4-10 have been newly added herein. These amendments and additions in the claims are believed to find support in the specification as originally filed. For example, the amendments in Claims 1-3 and new Claims 4-10 are believed to be supported by Figures 1-5 and their descriptions. Hence, no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the outstanding rejections, a brief summary of Claim 1 as currently amended is believed to be helpful. According to Claim 1 of the present invention, a metal heater includes: a metal plate having a heating face; a supporting device which supports a semiconductor wafer over and apart from the heating face; and at least one heating element

positioned to heat the metal plate. The metal plate has a thickness of 50 mm or less, the heating face has a surface flatness of 50 μm or less, and the heating element extends to an area within 25% of a diameter of the metal plate from an outer circumference of the metal plate.

Wang et al. and Futakuchiya et al. are directed to a wafer chuck and a heater unit for semiconductor processing, respectively. Nevertheless, neither Wang et al. nor Futakuchiya et al. teaches or suggests “a supporting device configured to support a semiconductor wafer over and apart from the heating face ..., wherein ... said heating face has a surface flatness of 50 μm or less ...” as recited in amended Claim 1. On the other hand, Wang et al. only shows a wafer-contacting surface 60 which receives and gravitationally support a substrate during its processing,¹ and Futakuchiya et al. also shows a heater unit 1 having only a flat surfaced upper base 3.² Therefore, the structure recited in Claim 1 is clearly distinguishable from Wang et al. and Futakuchiya et al.

Bremer is directed to a domestic electric appliance, and thus clearly does not teach or suggest “a supporting device configured to support a semiconductor wafer over and apart from the heating face ..., wherein ... said heating face has a surface flatness of 50 μm or less ...” as recited in amended Claim 1. Thus, the structure recited in Claim 1 is distinguishable from Bremer.

Because none of Wang et al., Futakuchiya et al. and Bremer discloses the supporting device as recited in Claim 1, even the combined teachings of these cited references would not render the metal heater recited in Claim obvious.

Likewise, Claim 10 recites “supporting means for supporting a semiconductor wafer over and apart from the heating face ..., wherein ... said heating face has a surface flatness of

¹ See Wang et al., Figure 6 and paragraph [0030].

² See Futakuchiya et al., Figure 1.

50 μ m or less” and thus is believed to include subject matter substantially similar to what is recited in Claim 1 to the extent discussed above. Thus, Claim 10 is also believed to be distinguishable from Wang et al., Futakuchiya et al. and Bremer.

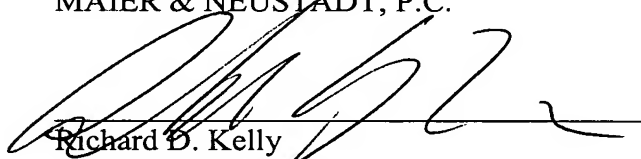
For the foregoing reasons, Claims 1 and 10 are believed to be allowable.

Furthermore, since Claims 2-9 depend directly or indirectly from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2-9 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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